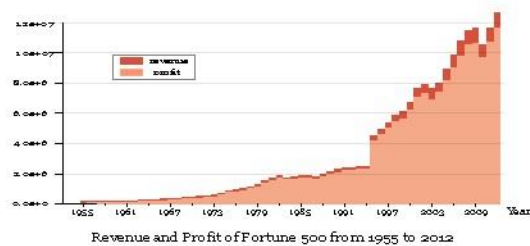
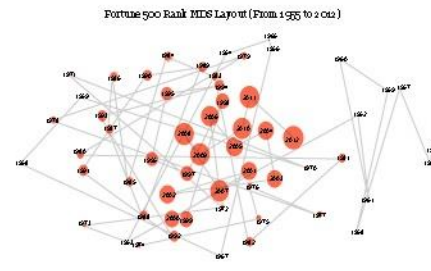
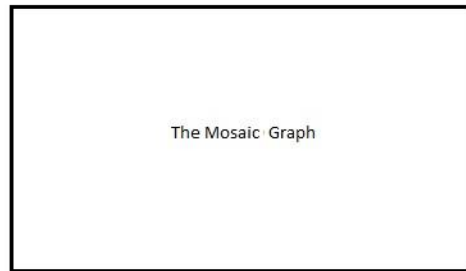


# Weekly Report

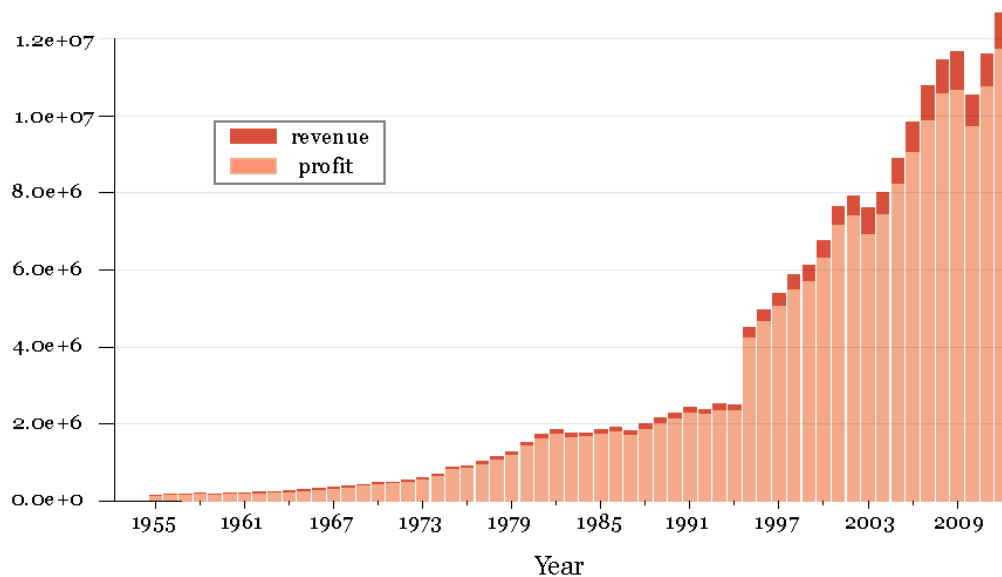
## Research

Last week I had a little bit design of the overall TopKVis layout with R (computation and positioning part) and Illustrator (decoration part). The mosaic graph and the single company/rank graph are still going on(Yaoyao).



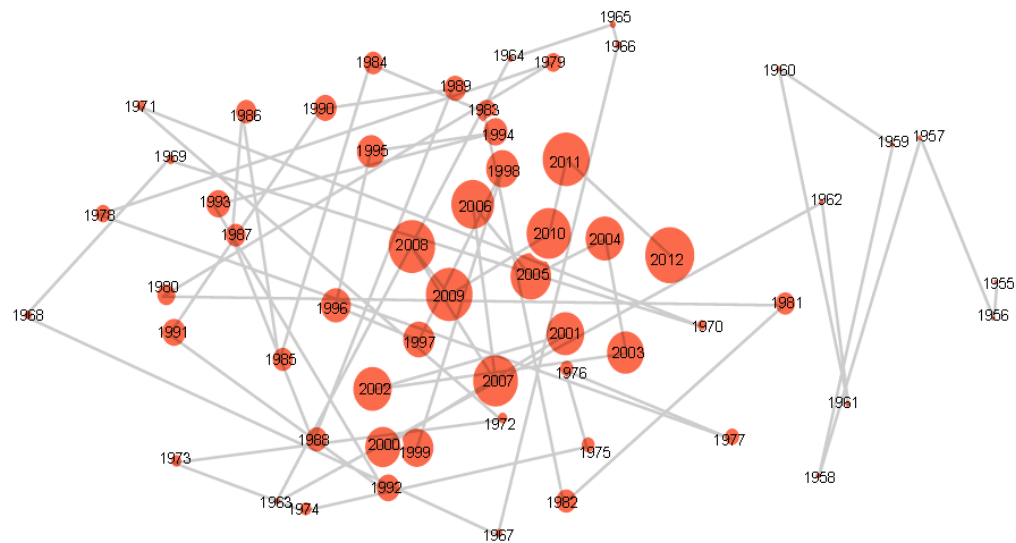
As shown in the picture above, there are two entries for the whole analytical process: the yearly revenue&profit chart which reveals unusual ups and downs of revenue/profit grows, and dynamic MDS projection of rank similarities which reflects outliers of ranks.

Revenue and Profit of Fortune 500 from 1955 to 2012



As it indicates in the revenue/profit chart, there are there years worth concerning, the year of 1994, 2003 and 2009. Looking for the node of the year 1994 in dynamic MDS projection, we found the node located near to those 21<sup>st</sup> century nodes. We believe that the new industrial revolution is formed in 1994. But we cannot always find clues in these two graphs, for example we see outliers in MDS among the year of 60s and 70s, but we cannot explain. Thus we need more specific information in Mosaic and year/company card. We want to make it useful to general rank data, people need to know when and where the rank changes and what it tells, and we should them. Maybe it is more BI less visualization, but it will be useful.

Fortune 500 Rank MDS Layout (From 1955 to 2012)



For MDS projection, we still apply dynamic layout particularly for stream data, which means predefined initial configuration to better maintain the smoothness of the layout.

We will too extend mosaic graph to stream data and apply “focus + context” techniques to it.

Also a stream data framework should be built for data archival and visualization.

## Reading

I had a reading of Nathan Yau’s new book *Visualizing This*.

## Miscellaneous

1. Courseware PPT and paper revision
2. HK transportation data is downloading, just downloading.

## Work to do

1. Further design of the Mosaic Graph.
2. Paper revision
3. Courseware PPT